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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 09/591,245 | 06/09/2000 | Jung-Gi Kim | P2008 | 3212 |
| 33942 | 7590 | 02/05/2004 | EXAMINER | |
| CHA & REITER, LLC 210 ROUTE 4 EAST STE 103 PARAMUS, NJ 07652 | | | CHOUDHARY, ANITA | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2153 | |

DATE MAILED: 02/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/591,245

Applicant(s)

KIM, JUNG-GI

Examiner

Anita Choudhary

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8,10-14,16-18 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8,10-14,16-18 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Response to Amendment

The amendment filed on November 24, 2004 under 37 CFR 1.312 has been entered.

Claims 1, 6-8, 10, 13, 14 and 17 have been amended and are presented for further examination.

New claim 25 has been added. Claims 3, 9, 15, and 19-24 have been cancelled.

Claims 1, 2, 4-8, 10-14, 16-18, and 25 are presented.

Response to Arguments

Applicant's arguments regarding claims 1-7 and 14-18 filed November 24, 2003 have been fully considered but they are not persuasive. Applicant argues that Nelson et al. (US 6,526,092) does not disclose or suggest a "compression state" or a "booting state". However Applicant attention is brought to the "record type field" and the "checksum field", having information *related* to compression state and booting state, respectively. Record type field indicates the format in which contents of a packet have been written or compressed (see col. 9 line 35-65, col. 11 lines 1-23). Record type field indicates information *related* to compression state (record type 0, 01, and 02). Checksum field shows information *related* to booting state. The checksum field shows information *related* to booting state. Checksum is used by the boot control program on the receiving modem to check whether packet was correctly transmitted and if so, begins to boot with the updated firmware (col. 8 lines 25-31). However if checksum does not match, the receiving modem responds with an error and does not boot with the updated firmware (col. 13 line 53- 59).

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Applicant's arguments with respect to claims 8-13 have been considered but are moot in view of the new ground(s) of rejection (see 35 USC § 103 below).

Claim Objections

Claim 10 is objected to because of the following informalities: Claim 10 should depend on claim 8 and not claim 9, which had been canceled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 recites the limitation ""said replaced updated firmware"" in line 1 and 2. There is insufficient antecedent basis for this limitation in the claim. It is unclear what the limitation is trying to refer to. Examiner has interpreted this limitation to mean "said copy of information stored in the first memory means to be replaced with said updated firmware" as referred to in claim 8, on which 10 should depend.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 4, 5, 14 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,526,092 to Nelson et al. (hereinafter "Nelson").

In considering claim 1, Nelson discloses an apparatus for upgrading the program stored in a firmware board (column 1, lines 16-18) comprising:

- A host computer for converting an execution file prepared by an operator into a file for production (column 15, lines 24-31);
- A flash memory disposed in the firmware board for storing a production-processing program (Fig. 2, "217"); and
- A personal computer (PC) for receiving the production file downloaded from the host computer and for storing the downloaded file in a corresponding region of the flash memory (column 3, lines 43-51).
- Wherein the host computer, prior to creation of the file for production, attaches information relating to a storage address of the flash memory, a compression state (record type), and a booting state (checksum) for the production file (column 8, lines 23-31, col. 9 line 35-65, col. 11 lines 1-23, col. 13 line 53- 59).

In considering claim 2, Nelson discloses comprising an RS232C line for connecting the PC to the firmware board (Fig. 2, "215").

In considering claim 4, Nelson discloses wherein the PC transmits the production file to the flash memory when a transmission command is inputted thereto (column 10, lines 2-3).

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In considering claim 5, Nelson discloses wherein the PC stores the production file in the flash memory using the production-processing program in the flash memory (column 3, lines 56-57).

In considering claim 14, Nelson discloses method for upgrading the program of a firmware board (column 1, lines 16-18) comprising the steps of:

- Providing a flash memory in the firmware board for storing a production-processing program (Fig. 2, “217”);
- Creating, by a host computer, a file for a production by converting an execution file prepared in advance into the file for production (column 15, lines 24-31);
- Receiving the production file, by a personal computer (PC) downloaded from the host computer (column 3, lines 43-47); and
- Storing the production file in the corresponding region of the flash memory (column 3, lines 43-51).
- Wherein the production file includes a header portion containing information relating to a storage address of the flash memory, a compression state (record type), and a booting state (checksum) for the production file (column 8, lines 23-31, col. 9 line 35-65, col. 11 lines 1-23, col. 13 line 53- 59).

In considering claim 16, Nelson discloses wherein the PC transmits the file for production to the flash memory when a transmission command is inputted thereto (column 10, lines 2-3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 10, 12, 13 and 25, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al (US 6,526,092) in view of Okanou (Us 5,689,640).

In referring to claim 8, although Nelson shows substantial features of the claimed invention, Nelson does not explicitly show a second memory means for storing a copy of information stored in the first memory to be replaced by the updated firmware. Nonetheless this feature is well known in the art, and would have been an obvious modification to the system disclosed by Nelson as evidenced by Okanou.

In an analogous art, Okanou shows a system for a network node downloading data into an active memory or backup memory. Okanou shows a second memory means (402 or 403) coupled to the first memory means (404, active memory) for storing a copy of information stored in the first memory means to be replaced with said updated firmware (col. 5 lines 30-42).

Given this feature, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system shown by Nelson to employ the features shown by Okanou in order to backup old firmware to be used in case new updated firmware has problems (see Okanou col. 1 lines 41-45).

In referring to claim 10, Okanou shows the second memory having said copy of information stored in the first memory means to be replaced with said updated firmware, is transferred back to the corresponding region of the first memory means (col. 5 lines 54-61).

In considering claim 12, Nelson discloses wherein said first memory means comprises a flash memory (Fig. 2, "217"), and wherein said communication means comprises a RS232C line (Fig. 2, "215").

In considering claim 13, Nelson discloses wherein said host computer is further operable for attaching a storage address information of said first memory means to said updated firmware (column 8, lines 26-27).

In referring to claim 25, Okanou shows apparatus for replacing a copy of information with an updated firmware (col. 5 lines 30-42).

Claims 6, 7, 11, 17, and 18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson in view of Okanou.

In considering claims 6, 7, 11, 17, and 18 although Nelson and Okanou do not explicitly state the use of Dynamic or Static RAM, Nelson does disclose the use of a second memory that is RAM for storing a copy of the production-processing program from the flash memory (column 3, lines 47-51) and transferring the production-processing program to flash memory when the program is upgraded (column 2, lines 56-57). A person having ordinary skill in the art would have readily recognized the advantages and desirability of modifying Nelson and Okanou by including the limitation of (1) Dynamic RAM and (2) Static RAM in order to:

(1) allow for the system to hold more data than when using RAM and to reduce system cost; and

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(2) improve the systems efficiency by increasing speed and reducing power consumption.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita Choudhary whose telephone number is (703) 305-5268.

The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

AC


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